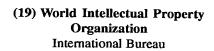
## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)







(43) International Publication Date 30 September 2004 (30.09.2004)

**PCT** 

(10) International Publication Number WO 2004/082707 A3

(51) International Patent Classification<sup>7</sup>: 38/25, 47/34, 47/26, 47/10

A61K 38/27,

(21) International Application Number:

PCT/EP2004/050286

(22) International Filing Date: 11 March 2004 (11.03.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

03100678.6

18 March 2003 (18.03.2003) EP

- (71) Applicant: ARES TRADING SA [CH/CH]; Zone Industrielle de l'Ouriettaz, CH-1170 Aubonne (CH).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): DONATI, Piergior-gio [IT/CH]; Rue de Lausanne 66, CH-1110 Morges (CH). SAMARITANI, Fabrizio [IT/IT]; Via Luigi Chiala 130, I-00139 Roma (IT).
- (74) Agent: SERONO INTERNATIONAL SA INTELLEC-TUAL PROPERTY DEPARTMENT; 12, Chemin des Aulx, Plan-les-Ouates, 1228 (CH).

- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

- with international search report
- (88) Date of publication of the international search report: 2 December 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STABILISATION OF GROWTH HORMONES IN SOLUTION

(57) Abstract: The invention relates to a liquid formulation comprising a growth hormone or a, substance, which stimulates release or potentiates the activity of endogenous hGH; a polyethylene-polypropylene glycol; a citrate buffer and a stabilizer, and to a process of preparation thereof.

## INTERNATIONAL SEARCH REPORT

International Application No PC. EP2004/050286

A CLASS	SEGATION OF SUPERIOR	FC=7EP2004/050286			
IPC 7	SFICATION OF SUBJECT MATTER A61K38/27 A61K38/25 A	61K47/34 A61K47/2	26 A61K47/10		
According	to International Patent Classification (IPC) or to both natio	nat classification and IPC			
	SEARCHED				
176 /	ocumentation searched (classification system followed by A61K				
	tion searched other than minimum documentation to the				
EPO-In	lata base consulted during the international search (name ternal, WPI Data, PAJ, MEDLINE	o of data base and, where practical,	search terms used)		
C. DOCUM	ENTS CONSIDERED TO BE RELEVANT				
Category °	Citation of document, with indication, where appropriat	e, of the relevant passages	Relevant to claim No.		
X	WO 97/29767 A (CSL LTD ;UNI MCNAMARA MICHAEL KEVIN (AU) 21 August 1997 (1997-08-21) example 3	: CHARMAN WT)	1,2, 6-12, 16-19		
Υ	US 5 567 677 A (HOEKBY ELVY 22 October 1996 (1996-10-22 claim 4	1-19			
Υ	EP 0 211 601 A (INT MINERAL 25 February 1987 (1987-02-2 page 5, line 19 page 6, line 17 page 6, line 31 - line 33	S & CHEM CORP) 5)	1-19		
Further documents are listed in the continuation of box C.  Y Patent family members are listed in annex.					
"A" documer conside "E" earlier do filing da "L" documen which is citation "O" documer other m "P" documen later tha	t which may throw doubts on priority claim(s) or cited to establish the publication date of another or other special reason (as specified)	cited to understand the invention  "X" document of particular cannot be considered involve an inventive s  "Y" document of particular cannot be considered document is combine ments, such combina in the art.  "&" document member of t	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed Invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled		
	September 2004  iiling address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2	15/09/200 Authorized officer	15/09/2004 Authorized officer		
	NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016	Bayrak, S			

## INTERNATIONAL SEARCH REPORT

International Application No PC EP2004/050286

			PC EP2004/050286		
Patent document cited in search report		Publication date		Patent family member(s)	Publication date
WO 9729767	Α	21-08-1997	AU	716747 B2	02-03-2000
			UΑ	1585597 A	02-09-1997
			WO	9729767 A1	21-08-1997
			CA	2246501 A1	21-08-1997
	•		CN	1214633 A ,B	21-04-1999
			ΕP	0889733 A1	13-01-1999
			JP	2000504696 T	18-04-2000
			RU	2191029 C2	20-10-2002
			TR	9801558 T2	23-11-1998
			US	6593296 B1	15-07-2003
					15-07-2003
US 5567677	Α	22-10-1996	ΑT	196092 T	15-09-2000
			AU	3913593 A	08-11-1993
			CA	2102693 A1	04-10-1993
			DΕ	69329367 D1	12-10-2000
			DE	69329367 T2	21-06-2001
			DK	587858 T3	18-12-2000
			ΕP	0587858 A1	23-03-1994
			ES -	2150940 T3	16-12-2000
			GR	3034925 T3	28-02-2001
			JΡ	3268557 B2	25-03-2002
			JР	6508156 T	14-09-1994
			NO	934355 A	01-12-1993
			NZ	251498 A	26-07-1995
			PT	587858 T	28-02-2001
			WO	9319776 A1	14-10-1993
FD 0011601		·			
EP 0211601	Α	25-02-1987	AU	6073386 A	05-02-1987
			BR	8603586 A	10-03-1987
			CN	86105483 A	28-01-1987
			DK	363086 A	31-01-1987
			EΡ	0211601 A2	25-02-1987
			JР	62070319 A	31-03-1987
			PT	83095 A ,B	01-08-1986
			ZΑ	8605704 A	24-06-1987